

REMARKS

Claims 1-2, 4-9, and 11-25 are pending. Claims 1-2, 4-6, 13 and 15-17 are rejected under 35 U.S.C. § 102(c) as being anticipated by Storm et al. (U.S. Pat. No. 6,175,561). Claims 7-9, 11-12, 14, 18-20, and 21-25 are rejected under 35 U.S.C. § 103(a).

Claim 1 is rejected under 35 U.S.C. § 102(e) as being anticipated by Storm et al. Claim 1 recites "A method for shifting the phase of a pseudorandom noise (PN) code, the method comprising: accepting a PN code with a first phase; determining a first time interval; *selecting a plurality of phase-shifting masks in response to the first time interval; shifting the PN code first phase with each phase-shifting mask from the plurality of selected phase-shifting masks; and* generating a PN code with a second phase, offset by the first time interval from the PN code first phase." (emphasis added).

Regarding claim 1, Storm et al. **do not disclose** "selecting a plurality of phase-shifting masks in response to the first time interval." Examiner indicates Figure 2, block 214 of Storm et al. and column 6, lines 44-46 and lines 58-60 as an anticipatory disclosure. Neither of these passages discloses the above-recited limitation. On the contrary, Storm et al. specifically disclose "The mask circuit 210 employs a predetermined mask that, when Exclusive-ORed with the contents of the NRT LSG 208, yields the correct state of the PN generator 205 at a predetermined time in the future." (col. 6, lines 53-56). Storm et al. rely on a single mask from mask register 212 which is loaded into mask circuit 210. The NRT LSG is then successively incremented, Exclusive-ORed with the selected mask and correlated with samples from buffer 202 by correlator 204. This procedure is described in detail at column 8, line 64 through column 9, line 14. Thus, Storm et al. disclose selecting a single mask and incrementing the NRT LSG to achieve the PN proper offset from an initial state stored in register 214. Storm et al. do not disclose "selecting a plurality of phase-shifting masks in response to the first time interval" as required by claim 1. Thus, claim 1 and depending claims 2, 4-9, and 11-14 are patentable under 35 U.S.C. § 102(c) over Storm et al.

Furthermore, Storm et al. **do not disclose** "shifting the PN code first phase with each phase-shifting mask from the plurality of selected phase-shifting masks" as required by claim 1. Examiner indicates Figure 2, block 210 of Storm et al. and column 6, lines 53-64 and column 7, lines 54-58 as an anticipatory disclosure. Neither of these passages disclose the above-recited limitation. As previously discussed, Storm et al. employ a single mask and rely on the sequence of values from the NRT LSG to produce a correlation result. (col. 6, lines 53-56). Thus, claim 1 and depending claims 2, 4-9, and 11-14 are patentable under 35 U.S.C. § 102(c) over Storm et al.

Finally, Storm et al. **do not disclose** "shifting the PN code first phase with each phase-shifting mask from the plurality of selected phase-shifting masks" as required by claim 1. Examiner again indicates Figure 2, block 210 of Storm et al. and column 6, lines 53-64 and column 7, lines 54-58 as an anticipatory disclosure. As previously stated, these citations do not disclose the above recited limitations. Applicants respectfully encourage Examiner to read them again. There is no suggestion that each phase-shifting mask from the plurality of phase shifting masks is used to shift the PN code first phase. Storm et al. disclose using a single mask in combination with sequential iterations of the NRT LSG 208. By way of contrast, the present invention may combine selected masks having different offsets to achieve a specific offset as described at page 15, lines 14-16. For all the foregoing reasons, therefore, claim 1 and depending claims 2, 4-9, and 11-14 are patentable under 35 U.S.C. § 102(c) over Storm et al.

Independent claim 15 is rejected under 35 U.S.C. § 102(e) as being anticipated by Storm et al. Claim 15 recites "A receiver, comprising: a memory having a port to supply a plurality of phase-shifting masks; *an application means to determine a first time interval, the application means cross-referencing the first time interval to the plurality of phase-shifting masks*, the application means having an output connected to the memory port to request the plurality of phase-shifting masks; and a pseudorandom noise (PN) code generator having a first input connected to the memory to accept the plurality of phase-shifting masks, *the PN code generator offsetting a PN code with each phase-shifting mask of the plurality of phase-shifting masks*, the

PN code generator having an output to supply the PN code with a second phase, offset from the PN code first phase.” (emphasis added).

Regarding claim 15, Storm et al. **do not disclose** “an application means to determine a first time interval, the application means cross-referencing the first time interval to the plurality of phase-shifting masks.” Examiner indicates Figure 2 and column 6, lines 58-60 of Storm et al. as an anticipatory disclosure. Therein, Storm et al. disclose “The masks correspond to individual phases of the phase space of the pilot signals in the communication system 100 (FIG. 1).” Storm et al. specifically disclose that each mask corresponds to an individual phase. There is no teaching or suggestion that a “first time interval” might be cross-referenced to “the plurality of phase-shifting masks” as required by claim 15. Thus, claim 15 and depending claims 16-17 are patentable under 35 U.S.C. § 102(e) over Storm et al.

Furthermore, Storm et al. **do not disclose** “the PN code generator offsetting a PN code with each phase-shifting mask of the plurality of phase-shifting masks” as required by claim 15. Examiner again indicates Figure 2 and column 6, line 56 of Storm et al. as an anticipatory disclosure. There is no suggestion that each phase-shifting mask from the plurality of phase shifting masks is used to shift the PN code first phase. Storm et al. disclose using a single mask in combination with sequential iterations of the NRT LSG 208. (col. 6, lines 53-56). By way of contrast, the present invention may combine selected masks having different offsets to achieve a specific offset as described at page 15, lines 14-16. For all the foregoing reasons, therefore, claim 15 and depending claims 16-17 are patentable under 35 U.S.C. § 102(e) over Storm et al.

Claim 25 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Storm et al. in view of Easton et al. (U.S. Pat. No. 6,590,886). Claim 25 recites “A method for conserving power in a slotted mode of operation, the method comprising: storing a plurality of phase-shifting masks; generating a synchronized pseudorandom noise (PN) code to despread transmissions; accepting a slotted mode sleep second time interval from a plurality of second time intervals; beginning the sleep mode at a first phase of the PN code; ending the sleep interval; *determining*

the first time interval between the beginning and the end of the sleep interval; and selecting a plurality of phase-shifting masks from storage in response to the first time interval; offsetting the PN code first phase with each phase-shifting mask from the plurality of selected phase-shifting masks; generating the PN code with a second phase; and resynchronizing the generated PN code to despread transmissions.” (emphasis added). Applicants note that Examiner’s rejection omits several limitations of claim 25.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. (MPEP § 2143). Applicant respectfully submits that Examiner has failed to establish all three criteria. Thus, claim 25 is patentable under 35 U.S.C. § 103(a) over Storm et al. in view of Easton et al.

Examiner states “Storm and Easton are analogous art because they are from the same field of endeavor.” Applicants respectfully submit that these are Examiner’s words based on improper hindsight and not the disclosure of Storm et al. or Easton et al. Examiner fails to offer any rationale for modifying the disclosure of Storm et al. A statement that modifications of the prior art to meet the claimed invention would have been “well within the ordinary skill of the art at the time the claimed invention was made” because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). See also *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000) (Court reversed obviousness rejection involving technologically simple concept because there was no finding as to the principle or specific understanding within the knowledge of a skilled artisan that would have motivated the skilled artisan to make the claimed invention); *Al-Site Corp. v. VSI Int’l Inc.*, 174 F.3d 1308, 50 USPQ2d

1161 (Fed. Cir. 1999) (The level of skill in the art cannot be relied upon to provide the suggestion to combine references.).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). Here, there is no teaching or suggestion to combine Storm et al. with Easton et al. apart from improper hindsight in view of the instant specification. Thus, claim 25 is patentable under 35 U.S.C. § 103(a).

Moreover, Examiner's proposed modification of Storm et al. Easton et al. must have a reasonable expectation of success. There is no disclosure by Storm et al. to suggest compatibility with slotted paging sleep intervals of Easton et al. For example, if sleep controller 204 (Figure 1) of Easton et al. sends a disable signal (col. 5, lines 19-21), how can a wireless receiver 104 (Figure 1) of Storm et al. receive a phone call? Applicants respectfully submit that receiving a phone call is very different from periodically checking for a page. Thus, Examiner's proposed modification would offer no reasonable expectation of success to one of ordinary skill in the art at the time of the invention.

Finally, Examiner's proposed combination of Storm et al. with Easton et al. fails to teach or suggest all the claim limitations. Even an improper combination of Storm et al. with Easton et al. **does not disclose** "selecting a plurality of phase-shifting masks from storage in response to

the first time interval" as required by claim 25. Storm et al. disclose using a single mask in combination with sequential iterations of the NRT LSG 208. (col. 6, lines 53-56). By way of contrast, the present invention may combine selected masks having different offsets to achieve a specific offset as described at page 15, lines 14-16. Thus, claim 25 is patentable under 35 U.S.C. § 103(a) over Storm et al. in view of Easton et al.

Moreover, an improper combination of Storm et al. with Easton et al. **does not disclose** "offsetting the PN code first phase with each phase-shifting mask from the plurality of selected phase-shifting masks" as required by claim 25. As previously discussed, Storm et al. disclose selecting a single mask and incrementing the NRT LSG to achieve the PN proper offset from an initial state stored in register 214. There is no teaching or suggestion in either reference to offset the PN code first phase with each phase-shifting mask from the plurality of selected phase-shifting masks. Applicants respectfully reiterate, therefore, that claim 25 is patentable under 35 U.S.C. § 103(a) over Storm et al. in view of Easton et al.

Applicants acknowledge the rejections of depending claims 7-9, 11-12, 14, 18-20, and 21-24 under 35 U.S.C. § 103(a), but consider them moot in view of the foregoing discussion.

In view of the foregoing, applicants respectfully request reconsideration and allowance of claims 1-2, 4-9, and 11-25. If the Examiner finds any issue that is unresolved, please call applicants' attorney by dialing the telephone number printed below.

Robert N. Rountree, LLC
70360 Highway 69
Cotopaxi, CO 81223
Phone/Fax: (719) 783-0990

Respectfully submitted,



Robert N. Rountree
Attorney for Applicants
Reg. No. 39,347